Amendments to the Specification

Please replace the title on page 1, line 1, and on page 41, line 1 with the following rewritten title:

--TRANSGENIC PLANTS EXPRESSING TEMPORIN PEPTIDES ~~THAT ARE RESISTANT TO A BROAD SPECTRUM OF PATHOGENS~~--

Please replace the paragraph beginning on page 9, line 18, with the following rewritten paragraph:

--The antifungal activity of a given dermaseptin peptide is assessed by utilizing the fungal strains *Phytophthora cactorum* and/or *Fusarium solani*. The selected fungal strain is grown on Five Cereal Agar (FCA containing 20 gL^{-1} five cereal baby food instant flakes, and 8 gL^{-1} agar[3] (Terras et al., *The Plant Cell* 7:573-588, 1995). After 5 days growth at room temperature a mycelial plug is removed and placed upside down in the center of a fresh FCA plate. A sterile solution (10 µl) of the test peptide is then introduced into a well 3 cm from the edge of the plate and a control well containing sterile water is established on the same plate. Various concentrations of the test peptide may be tested on the same plate, or on other plates. The assay plates are incubated for 5 days at room temperature, after which the zone of growth inhibition around each well is measured.--

Please replace the paragraph beginning on page 11, line 28, with the following rewritten paragraph:

--The temporin peptide is determined to have biological activity if, under the conditions of this assay, it is capable of inhibiting bacterial growth by at least 10% at a concentration of 100 [[:g]] µg per ml (i.e., at this concentration, the number of bacterial colonies is no more than 90% that of the control plate).--

Please replace the paragraph beginning on page 12, line 12, with the following rewritten paragraph:

--The temporin peptide is determined to have biological activity if, under the conditions of this assay, it is capable of inhibiting fungal growth at a concentration of 5 [[:g]] µg per ml (i.e., there is a discernible zone of inhibition around a well containing this concentration of peptide).--

Please replace the paragraphs beginning on page 30, line 4, with the following rewritten paragraphs:

--60 µl of LB medium containing *Agrobacterium* (transformed with the vector of interest) in the late log phase of growth was added to each petri dish, and the dishes were then incubated at low light intensity (500 lux) for 3 days in the presence of the *Agrobacterium.* The plant tissue was then washed with S2 medium containing 1 g/L carbenicillin, blotted dry on filter paper, and placed upside down on S4 medium. S4 medium contained the components listed in Murashige and Skoog, *Physiol. Plant.* **15**:473-479, 1962 minus sucrose and supplemented with 200 mg/L glutamine, 0.5 g/L MES, pH 5.7, 0.5 g/L PVP, 20 g/L mannitol, 20 g/L glucose, 40 mg/L adenine-SO_4, 0.5% agarose, 1 mg/L trans-zeatin, 0.1 mg/L NAA, 1 g/L carbenicillin and 50 µg/ml kanamycin, 10 mg/L ~~AgNO3~~ $AgNO_3$). The plant tissue samples were placed at room temperature (RT) at 3000 lux to allow for callus formation. After two weeks, many small calli formed at the wounded edges of the leaves and stems. The small calli were removed and transferred to fresh S6 medium (S4 without NAA). After 2-3 weeks, the calli were transferred to S8 medium (S6 supplemented with 0.1 mg/L GA_3) to allow for shoot formation.

After two weeks on S8 medium, the first shoots (0.5 cm) were transferred to S1 medium. This medium contained the components described in Gamborg et al., *Exp. Cell Res.* **50**:151-158, 1968, with the addition of 20 g/L sucrose, 150 mg/L ~~CaCl2~~ $CaCl_2$, 0.4% agarose, pH 5.8, 1 g/L carbenicillin and 50 µg/ml kanamycin. The S1 medium and the shoots were placed in Magenta jars to allow for root formation. After one week the shoots had rooted. In order to avoid selecting identical shoots, transfer of shoots from the same or closely linked calli was avoided.--

Please replace the paragraph beginning on page 30, line 30, with the following rewritten paragraph:

--A simplified early detection method for disease resistance assays was developed. Control and transgenic calli were grown on S4 medium (MS media without sucrose and

supplemented with 200 mg/L glutamine, 0.5 g/L MES, pH 5.7, 0.5 g/L PVP, 20 g/L mannitol, 20 g/L glucose, 40 mg/L adenine-SO4, 0.5% agarose, 1 mg/L trans-zeatin, 0.1 mg/L NAA, 1 g/L carbenicillin and 50 µg/ml kanamycin, 10 mg/L ~~AgNO3~~ $AgNO_3$). The samples were then placed at RT at 3000 lux to allow for callus formation. After two weeks, many small calli formed at wounded edges of the leaves and stems. The small calli were removed and transferred to fresh S6 medium (S4 without NAA). After 2-3 weeks, the calli were transferred to fresh medium and grown in the presence of phytopathogens, *Fusarium* or *Phytophthora*. At the end of the experiments, calli that survived and stayed bright green were scored. No fungal resistant calli were found in the control samples, and calli that were resistant to the fungal pathogen were found to be transformed.--

Please replace the paragraph beginning on page 32, line 29, with the following rewritten paragraph:

--Transgenic potato plants containing $pDMSRA_2$ and transgenic tobacco plants containing either $pDMSRA_2$ or $pRSHMSRA_2$ were tested as described and showed resistance to the pathogen[[:]]. After one week of growth in the presence of the bacterial culture the transgenic plants were uninfected (as determined by visual inspection) and continued to grow. In sharp contrast, a control plant challenged with bacterial culture was severely infected after one week of incubation, growth was inhibited and the plant died after 2-3 weeks of exposure to fungal pathogens. --

Please replace the abstract on page 41, line 3 with the following rewritten abstract:

--Transgenic plants that express ~~dermaseptin and/or~~ temporin peptides are disclosed. In certain embodiments, these plants have enhanced, broad-spectrum pathogen resistance and are useful as agricultural or horticultural crops. In other embodiments, the plants are used to produce large quantities of the ~~dermaseptin and/or~~ temporin peptide[[s]].--